AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently Amended). A screening method for genes participating in increase in productivity and/or improvement in flavor in the production of an alcohol or an alcoholic beverage, characterized in that, (a) the whole genome sequence of industrial yeast is analyzed, (b) ~~these~~ the sequence is compared with that of Saccharomyces cerevisiae, (c) a gene of the industrial yeast encoding an amino acid sequence having 70 to 97% identity to an amino acid sequence encoded by the gene of Saccharomyces cerevisiae is selected, and (d) functional analysis of the selected gene is carried out, whereby the character given to the yeast by the gene is identified.

Claim 2 (Currently Amended). ~~A screening~~ The method ~~claimed in~~ according to Claim 1, wherein a DNA array is used for the functional analysis in (d) ~~of Claim 1~~.

Claim 3 (Currently Amended). ~~A~~ The method ~~as claimed in~~ according to Claim 2, wherein ~~a~~ said DNA array~~, in which~~ comprises one or more ~~of~~ oligonucleotides ~~comprising the following~~ adhered to a solid support;

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementary DNA sequence ~~is adhered to a solid support, is used;~~

~~DNA sequence (1) having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial yeast and (2) not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence~~.

Claim 4 (Currently Amended). ~~A~~ The method ~~as claimed in~~ according to Claim ~~2~~ 3, wherein ~~a DNA array, in which~~ said one or more of oligonucleotides ~~hybridizing in~~ are hybrized under a stringent condition ~~to the oligonucleotides defined in Claim 3 is/are adhered to a solid support, is used~~.

Claim 5 (Currently Amended). ~~A~~ The method ~~as claimed in Claims 2~~ according to Claim 2, wherein ~~a~~ said DNA array~~, in which~~ comprises one or more ~~of oligonuclaeotides~~ oligonucleotides adhered to a solid support; ~~comprising the following~~

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides

sequence in the whole genome sequence, or its ~~complementarty~~ complementary DNA sequence ~~is adhered to a solid support, is used;~~

~~DNA sequence (1) having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and~~

~~(2) not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence~~.

Claim 6 (Currently Amended). ~~A~~ The method ~~as claimed in~~ according to Claim ~~2~~ 5, wherein ~~a DNA array, in which~~ said one or more of oligonucleotides ~~hybridizing in~~ are hybridized under a stringent condition ~~to the oligonucleotides defined in Claim 5 is/are adhered to a solid support, is used~~.

Claim 7 (Currently Amended). ~~A~~ The method ~~as claimed in~~ according to Claim ~~2~~ 3, wherein ~~a~~ said DNA array~~, in which oligonucleotides selected from~~ comprises two or more oligonucleotides ~~groups of the following 4 groups consisting of one or more of oligonucleotides defined in Claim 3, one or more of oligonucleotides defined in Claim 4, one or more of oligonucleotides defined in Claim 5, and one or more of oligonucleotides defined in Claim 6 are adhered to a solid support, is used~~.

Claim 8 (Currently Amended). The ~~screening~~ method according to ~~any of Claims~~ Claim 1 ~~to 7~~, wherein the industrial yeast is brewing yeast.

Claim 9 (Currently Amended). The ~~screening~~ method according to ~~any of Claims~~ Claim 1 ~~to 8~~, wherein the brewing yeast is beer yeast.

Claim 10 (Currently Amended). ~~Gene~~ A gene which is obtained by the screening method according to Claim 1.

Claim 11 (Currently Amended). The gene according to Claim 10, which is characterized by ~~that, when the gene mentioned in Claim 10 is expressed in yeast,~~ being able to increase the concentration of sulfite in a culture medium of ~~the~~ yeast ~~increases~~ when said gene is expressed in yeast.

Claim 12 (Currently Amended). DNA which comprises a DNA sequence represented by SEQ ID NO: 1 or 2, and DNA which hybridizes to ~~the~~ said DNA under stringent condition.

Claim 13 (Currently Amended). DNA which encodes a polypeptide having an amino acid sequence represented by SEQ ID NO: 3 or 4, and DNA which encodes polypeptide having an amino acid sequence in which one to several amino acid ~~residue(s) is/are~~ residues are deficient, ~~and/or~~ substituted, ~~and/or~~ added or a combination thereof in an amino acid sequence represented by SEQ ID NO: 3 or 4.

Claim 14 (Currently Amended). A recombinant vector containing the gene ~~or the DNA mentioned in any~~ of ~~Claims 9 to 12~~ Claim 10.

Claim 15 (Currently Amended). The recombinant vector according to Claim ~~9~~ 14, wherein a promoter, a ~~and/or~~ terminator, or both ~~are/is~~ are placed adjacent to ~~the~~ said gene ~~or the DNA mentioned in any of Claims 10 to 13~~.

Claim 16 (Currently Amended). The recombinant vector according to Claim 15, wherein ~~the~~ said promoter ~~is a promoter which~~ shows constitutive expression.

Claim 17 (Currently Amended). The recombinant vector according to Claim 15 ~~or 16~~, wherein ~~the~~ said promoter is a promoter of glyceraldehyde-3-phosphate dehydrogenase gene.

Claim 18 (Currently Amended). A transformant containing the gene ~~or the DNA or the recombinant vector mentioned in any of Claims~~ according to Claim 10 ~~to 17~~.

Claim 19 (Currently Amended). The transformant according to Claim 18, wherein ~~the~~ said transformant belongs to yeast of genus Saccharomyces.

Claim 20 (Currently Amended). A polypeptide encoded by the gene ~~or the DNA mentioned in any of Claims~~ according to Claim 10 ~~to 13~~ or a polypeptide having an amino acid sequence in which one to several amino acid ~~residue(s) is/are~~ residues are deficient, ~~and/or~~ substituted, ~~and/or~~ added, or a combination thereof in an amino acid sequence in the said polypeptide.

Claim 21 (Currently Amended). A polypeptide having an amino acid sequence represented by SEQ ID NO: 3 or 4 or a polypeptide having an amino acid sequence in which one to several amino acid ~~residue(s) is/are~~ residues are deficient, ~~and/or~~ substituted, ~~and/or~~ added, or a combination thereof in the amino acid sequence represented by SEQ ID NO: 3 or 4.

Claim 22 (Currently Amended). A method for the production of an alcohol or an alcoholic beverage~~, characterized in that,~~ comprising subjecting the transformant ~~mentioned in~~ according to Claim 18 to fermentation in a sugar-containing medium selected from the group consisting of wort, grape juice, rice juice and glucose syrup ~~or 19 is used~~.

Claim 23 (Currently Amended). A breeding method of yeast which is suitable for the production of an alcohol or an alcoholic beverage~~, characterized in that,~~ comprising controlling expression of the gene ~~mentioned in~~ according to Claim 10 ~~or 11 or gene on the DNA mentioned in Claim 12 or 13 is controlled~~.

Claim 24 (Original). The breeding method according to Claim 23, wherein the yeast belongs to the genus Saccharomyces.

Claim 25 (Currently Amended). Yeast obtained by the breeding method according to Claim 23 ~~or 24~~.

Claim 26 (Currently Amended). A method for the production of an alcohol or an alcoholic beverage comprising using the yeast ~~mentioned in~~ according to Claim 25.

Claim 27 (Currently Amended). An alcohol or an alcoholic beverage which is produced using the method for the production of an alcohol or an alcoholic beverage according to Claim 26.

Claim 28 (Currently Amended). A DNA array~~, in which~~ comprising one or more ~~of~~ oligonucleotides ~~comprising the following~~ adhered to a solid support;

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementary DNA sequence ~~is adhered to a solid support;~~

~~DNA sequence (1) having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial yeast and~~

~~(2) not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence~~.

Claim 29 (Currently Amended). ~~A~~ The DNA array~~, in which~~ according to Claim 28, wherein said one or more of oligonucleotides ~~hybridizing in~~ are hybridized under a stringent condition~~ to the oligonucleotides defined in Claim 28 is/are adhered to a solid support~~.

Claim 30 (Currently Amended). A DNA array~~, in which~~ comprising one or more ~~of~~ oligonuclaeotides ~~comprising the following~~ adhered to a solid support;

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementarty DNA sequence ~~is adhered to a solid support;~~

~~DNA sequence (1) having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and~~

~~(2) not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence~~.

Claim 31 (Currently Amended). ~~A~~ The DNA array~~, in which~~ according to Claim 30, wherein said one or more of oligonucleotides ~~hybridizing in~~ are hybridized under a stringent condition ~~to the oligonucleotides defined in Claim 30 is/are adhered to a solid support~~.

Claim 32 (Currently Amended). ~~A~~ The DNA array~~, in which oligonucleotides selected from two or more groups of the following 4 groups consisting of one or more of oligonucleotides defined in~~ according to Claim 28, wherein said DNA array comprises two ~~one~~ or more ~~of~~ oligonucleotides ~~defined in Claim 29, one or more of oligonucleotides defined in Claim 30, and one or more of oligonucleotides defined in Claim 31 are adhered to a solid support~~.

Claim 33 (New). The method according to Claim 5, wherein said DNA array comprises two or more oligonucleotides.

Claim 34 (New). A recombinant vector containing the DNA of Claim 11.

Claim 35 (New). The recombinant vector according to Claim 34, wherein a promoter, a terminator, or both are placed adjacent to said DNA.

Claim 36 (New). The recombinant vector according to Claim 35, wherein said promoter shows constitutive expression.

Claim 37 (New). The recombinant vector according to Claim 35, wherein said promoter is a promoter of glyceraldehyde-3-phosphate dehydrogenase gene.

Claim 38 (New). A recombinant vector containing the DNA of Claim 12.

Claim 39 (New). The recombinant vector according to Claim 38, wherein a promoter, a terminator, or both are placed adjacent to said DNA.

Claim 40 (New). The recombinant vector according to Claim 39, wherein said promoter shows constitutive expression.

Claim 41 (New). The recombinant vector according to Claim 39, wherein said promoter is a promoter of glyceraldehyde-3-phosphate dehydrogenase gene.

Claim 42 (New). A transformant containing the DNA according to Claim 12.

Claim 43 (New). The transformant according to Claim 42, wherein said transformant belongs to yeast of genus Saccharomyces.

Claim 44 (New). A transformant containing the DNA according to Claim 13.

Claim 45 (New). The transformant according to Claim 44, wherein said transformant belongs to yeast of genus Saccharomyces.

Claim 46 (New). The DNA array according to Claim 30, wherein said DNA array comprises two or more oligonucleotides.